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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,404	04/13/2004	Christopher J. Nagel	2751.2001 US7	3242
38473 7590 02/04/2009 ELMORE PATENT LAW GROUP, PC 515 Groton Road Unit 1R Westford, MA 01886				
EXAMINER				
KOPEC, MARK T				
ART UNIT		PAPER NUMBER		
1796				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/823,404

**Applicant(s)**

NAGEL, CHRISTOPHER J.

**Examiner**

Mark Kopec

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2008 and 17 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 44-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-47 and 49 is/are allowed.
- 6) ☒ Claim(s) 48, 50-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission(s) filed on 07/03/08 and 10/17/08 has been entered.

Claims 44-54 (filed 11/07/06) are pending.

The Terminal Disclaimer filed 10/17/08 is Approved.

The 1.132 Declaration filed 07/03/08 is entered. Note that a full copy of the Declaration, including the submitted color pages, has been placed in "Artifact File" in copending S.N. 10/569,090 (now U.S. 7,238,297).

The 112, first paragraph, enablement rejection is withdrawn in view of applicant's remarks and 1.132 Declaration.

The 1.132 Declaration and accompanying remarks are sufficient to overcome the pending enablement rejections.

With respect to the instant claims, applicant has demonstrated that the claimed magnetic properties have been observed (to at least some extent) in four of the five inventive examples utilizing  $\geq 99.98\%$  pure copper as a starting material. The 1.132 Declaration clearly discloses radial magnetic

attraction to a Nd/B/Fe magnet (at 298K) and attraction to Fe filings (at 77K). After careful consideration of the evidence as a whole, the examiner agrees applicant has demonstrated that the disclosure, as filed, would have enabled the claimed invention for one skilled in the art at the time of filing.

It should be noted that the instant claims are drawn to existing materials that exhibit novel properties. As is evident from the prosecution history of this application and the parent application(s), the instant application disclosure proposes unproven scientific theory that may be construed as contrary to commonly accepted theories regarding quantum mechanics and interactions between various forms of matter. The instantly proposed theory includes changing the atomic orbitals of matter, as well as the introduction and definition of the terms "zurn" and "isozurn". However, differences between the claimed materials and the prior art materials could be result of atomic interactions which may be described and predicted by the current and well-explored theories regarding the behavior of materials.

Withdrawal of the 112, first paragraph, enablement rejection should not be construed as a validation by the United States Patent Office of applicant's unproved scientific theories. Applicant has demonstrated that the claimed materials (produced by specific heating and cooling operations under

particular atmospheric conditions) are patentably different from the prior art of record. The provided 1.132 Declaration discloses third party confirmation of the claimed properties. The instant claims are enabled as the skilled artisan could follow the disclosed heating and cooling steps delineated by applicant in order to make and use the instantly claimed materials. Furthermore, the invention has at least one credible utility as disclosed in the specification and prior art. See, e.g., *Raytheon v. Roper*, 724 F.2d 951, 958, 220 USPQ 592, 598 (Fed. Cir. 1983), cert. denied, 469 U.S. 835 (1984).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 51-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner respectfully maintains that the limitations recited in each of these claims do not find literal or inherent

support in the disclosure as originally filed. Such limitations (regarding the magnetic properties of the "tailored copper") are not disclosed in the specification not are they an inherent certainty in the examples.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 48, 51, 52, 54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "substantially free of spots of magnetic attraction" (claim 48), "substantially no difference in Gauss readings..." (claim 51), and "essentially zero" (claims 52 and 54) are relative terms which render the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. When a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If, as in the instant case it does not, a determination

is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. While, as a general proposition, broadening modifiers are standard tools in claim drafting in order to avoid reliance on the doctrine of equivalents in infringement actions, when the scope of the claim is unclear a rejection under 35 U.S.C. 112, second paragraph, is proper. See *In re Wiggins*, 488 F. 2d 538, 541, 179 USPQ 421, 423 (CCPA 1973).

Applicant's remarks regarding the above terminology are noted.

The examiner respectfully maintains that such language is indefinite. The skill artisan or potential infringer would be unable to determine the metes and bounds of the instant claims. When a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. Even if the specification uses the same term of degree as in the claim, a rejection may be proper if the scope of the term is not understood when read in light of the

specification. While, as a general proposition, broadening modifiers are standard tools in claim drafting in order to avoid reliance on the doctrine of equivalents in infringement actions, when the scope of the claim is unclear a rejection under 35 U.S.C. 112, second paragraph, is proper. See *In re Wiggins*, 488 F. 2d 538, 541, 179 USPQ 421, 423 (CCPA 1973). Additionally, when relative terms are used in claims wherein the improvement over the prior art rests entirely upon size or weight of an element in a combination of elements, as appears to be the instant case, the adequacy of the disclosure of a standard is of greater criticality.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 50-54 are rejected under 35 U.S.C. 102(b) as being anticipated by either Svensson et al (*Magnetic and electrical properties of copper-iron...*), Dovgopol et al (*Magnetic, thermodynamic, and kinetic properties of copper containing 0.4-2.0 atom% iron impurities*), or Campbell et al (*A Moessbauer study of the magnetic properties of copper-iron (CuFe) alloys*).



Svensson et al discloses Cu-Fe alloys containing 0.2-1.7 atom% Fe (Abstract).

Dovgopol et al discloses Cu-Fe alloys containing 0.4-2.0 atom% Fe (Abstract).

Campbell et al discloses Cu-Fe alloys containing 0.24-4.6 atom% Fe (Abstract).

The examiner respectfully submits that the instant limitations "substantially free of spots of magnetic attraction", "substantially no difference in Gauss readings...", and "essentially zero" include the small amounts of Fe disclosed above.

The reference specifically or inherently meets each of the claimed limitations.

With respect to the prior art rejections over claims 44-49, each of the reference relied upon teaches Cu-Fe alloys with varying amounts of Fe responsible for magnetic behavior. As stated by applicant at page 7 of the response filed 11/07/06, the instant claims do not include the amounts of iron distributed through the prior art material(s) to achieve magnetism, nor is there any reason/motivation for removing iron from the prior art compositions to arrive at the instant claims.

Applicant's remarks regarding this rejection are noted.

The examiner respectfully submits that the above prior art references specifically or inherently meets each of the claimed limitations.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

Claims 44-49 are allowable over the prior art.

With respect to the prior art rejections over claims 44-49, each of the reference relied upon teaches Cu-Fe alloys with varying amounts of Fe responsible for magnetic behavior. The examiner agrees that instant claims 44-49 are limited to compositions wherein the copper (as opposed to iron) possesses the claimed magnetic properties. As stated by applicant at page 7 of the response filed 11/07/06, the instant claims, which specify "substantially free of other metals", do not include the amounts of iron distributed through the prior art material(s) to achieve magnetism, nor is there any reason/motivation for removing iron from the prior art compositions to arrive at the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Kopec/  
Primary Examiner, Art Unit  
1796

MK  
February 2, 2009